

EXHIBIT A

PRELIMINARY ENGINEERING REPORT FOR SUPPLYING POTABLE WATER TO MEET BOTH THE SHORT AND LONG TERM WATER NEEDS OF DECATUR, RIPLEY AND JENNINGS COUNTIES

**FOR THE
DECATUR COUNTY RURAL WATER CORPORATION, INC.
DECATUR COUNTY, INDIANA**

SEPTEMBER, 2007

EXHIBIT A
PRELIMINARY ENGINEERING REPORT
FOR
SUPPLYING POTABLE WATER TO MEET BOTH THE SHORT AND LONG TERM
WATER NEEDS OF DECATUR, RIPLEY AND JENNINGS COUNTIES
FOR THE
DECATUR COUNTY RURAL WATER CORPORATION, INC.
DECATUR COUNTY, INDIANA

BOARD MEMBERS

Ersel J. Rogers, President
Norman Campbell, Vice-President
Joseph Moorman, Treasurer
Dennis Collins, Secretary
Dennis Weber, Member
Patricia Anderson, Member
Sam Harbers, Member
Marc Haston, Member

OPERATIONS MANAGER

Jamie Goodchild

OFFICE MANAGER

Doreen Oesterling

ATTORNEY

J. Christopher Janak
Bose, McKinney and Evans

PREPARED BY

MIDWESTERN ENGINEERS, INC.
Loogootee, Indiana

SEPTEMBER, 2007

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE</u>
I. Introduction - Purpose and Need	1
II. Background Information	2
A. History	2
B. Previous Water System Improvement Projects	3
C. Current System Facilities	4
D. Area Water Demands	6
III. Water Supply Alternatives	8
A. Option A – Transmission and Distribution Improvements to Maximize City of Greensburg Supply	8
B. Option B – Transmission and Distribution Improvements to Bring Additional Supply from Eastern Bartholomew Water	9
C. Option C – Transmission and Distribution Improvements to Bring Additional Supply from Jennings County Water	10
IV. Water Supply Alternatives - Probable Project Costs	11
V. Conclusions and Recommendations	12

LIST OF TABLES

Table No. 1	Summary of Previous Construction Projects
Table No. 2	Historical Customer and Water Usage Information
Table No. 3	Designated Industrial Sites and Water Demand Projections
Table No. 4	Water Supply Alternatives - Probable Project Cost Summary

LIST OF FIGURES

Figure No. 1	Designated Industrial Site Locations
--------------	--------------------------------------

LIST OF APPENDICES

Appendix A	Existing System with Proposed Ph IV Improvements Overall Map
Appendix B	Proposed Water Supply Alternative Map
Appendix C	Probable Project Costs

EXHIBIT A
PRELIMINARY ENGINEERING REPORT
FOR
SUPPLYING POTABLE WATER TO MEET BOTH THE
SHORT AND LONG TERM WATER NEEDS OF DECATUR,
RIPLEY AND JENNINGS COUNTIES
FOR THE
DECATUR COUNTY RURAL WATER CORPORATION, INC.

September, 2007

I. INTRODUCTION – PURPOSE AND NEED

In the Summer of 2006, Honda of America Manufacturing, Inc. (Honda) announced plans to build a new automotive assembly plant Northwest of the City of Greensburg. This plant had an immediate and dramatic effect on the potable water supply demands of the area due to its water consumption needs. Although an adequate potable water supply solution for the Honda assembly plant was found, the announcement made evident an area-wide water deficiency issue.

The Honda assembly plant will also act as a stimulant for supporting factories producing automotive components and complementary industrial, commercial and residential growth. This complementary growth, coupled with normal economic expansion will greatly increase the water demands of the Decatur, Ripley and Jennings County area.

The Decatur County Rural Water Corporation (DCRW) currently provides water service to approximately 2/3 of Decatur County, a small portion of Ripley County and has plans to expand into Jennings County as part of the Phase IV expansion project scheduled to begin construction in 2008. The system serves residential and commercial areas between the City of Greensburg and the Honda manufacturing plant site and areas immediately south, north and west of the Honda manufacturing plant site. Currently, the Greensburg Decatur County Economic Development Corporation (EDC) is marketing numerous properties around Decatur County for industrial sites. The majority of these properties are within the DCRW service territory.

The primary purpose of this report is to provide an understanding of the potable water supply needs within Decatur, Ripley and Jennings Counties and present the most feasible, economical alternatives to meet those needs. The report focuses on maximizing current available water supply sources and providing transmission/distribution improvements aimed at getting water supply to areas in which economic growth will occur. The report also addresses possible long-term water supply issues. Probable

project costs for various options will be presented. Conclusions and recommendations are presented to aid the implementation of the various options.

II. BACKGROUND INFORMATION

A. History

The region has a long history of needing an adequate and dependable source of water. Although many of the small towns and cities in the three county area have their own potable water system, none have abundant, excess supplies that could be utilized regionally. In the 1960's and 1970's several small rural water systems were started in Ripley and Jennings Counties to bring water to the rural areas. In the 1960's, the Decatur County Rural Water Association, Inc. was formed. This Association attempted (both in the 1960's and 1970's) to develop a water system for Decatur County. The water need was proven at the time; however, a water source was not available and the ventures were abandoned.

In the late 1980's/early 1990's the City of Greensburg constructed a reservoir in conjunction with their surface and well supply, thereby making available a water supply for areas of Decatur County. In 1991, interested residents of the rural area reactivated the Decatur County Rural Water Association, Inc. for the purpose of developing a potable water system throughout the County. Completion of an overall Master Plan was done in 1992. The Master Plan outlined two alternatives for water source. The first was connection to the City of Greensburg and the second was construction of a new reservoir along with a surface water treatment system. Cost estimates provided indicated that the construction cost of a new reservoir and surface water treatment plant were excessive. Thus, connection to the City of Greensburg was pursued. A water purchase contract between the City of Greensburg and Decatur County Rural Water (DCRW) was executed.

In late 1995, bids were received by DCRW for construction of their Phase I and II facilities. Phase I included a connection to the City of Greensburg (on the south side of the City), a 300 gpm booster station, a 250,000 gallon elevated water storage tank and approximately 65 miles of transmission/distribution mains. Phase II included connection to the City of Greensburg (on the northwest side of the City) and approximately 10 miles of transmission/distribution mains. The facilities were completed, and in 1997, the Corporation began selling water to approximately 470 customers.

The Board of Directors of DCRW established a policy that subsequent construction phases to expand water service throughout Decatur County would be pursued as need, funding and overall system requirements permit. In the late 1990's/early 2000's, numerous requests for water service were received throughout Decatur County and the northwest corner of Ripley County. DCRW

embarked on their next major expansion project (Phase III). Bids for the Phase III project were received in late 2003. Phase III consisted of approximately 60 miles of transmission/distribution mains. The facilities were completed, and in 2005, DCRW began selling water to an additional 330 customers.

Immediately upon completion of Phase III, DCRW began receiving requests for water service throughout Decatur County and the northeast corner of Jennings County. Planning for their Phase IV expansion project was initiated in late 2005/early 2006. Phase IV will consist of approximately 20 miles of transmission/distribution mains and bring water to over 100 additional customers. Financing for this project is currently being secured through USDA-Rural Development and construction will likely start in 2008.

In 2006, Honda of America Manufacturing, Inc. (Honda) announced plans to locate a new assembly plant just northwest of the City of Greensburg. Throughout the planning and construction of the Honda plant (including presently) DCRW has provided service to Honda and the surrounding area via DCRW's 12" mains. Discussions regarding permanent water service to the facility began in 2006 between the City of Greensburg and Decatur County Rural Water. An agreement between the parties was reached in Spring of 2007. The Agreement allowed the City of Greensburg to serve the Honda plant on a long term basis in exchange for an agreement that established service territory boundaries and contractually increased the amount of water DCRW can purchase from the City of Greensburg.

B. Previous Water System Improvement Projects

The Decatur County Rural Water Corporation has completed numerous water system improvement/expansion type projects. In fact, DCRW has built their system by utilizing planned, phased construction projects. The majority of the system was constructed in three main phases (with a fourth phase currently planned). DCRW has also undertaken three main relocation projects of existing facilities. These projects were necessitated due to an INDOT renovation to SR 46 and all the INDOT upgrades of roads adjacent and near the Honda manufacturing site. A summary of these projects is as follows:

Table No. 1
Summary of Previous Construction Projects

<u>Project</u>	<u>Year Construction Completed</u>	<u>Project Cost</u>
Phase I Expansion	1997	\$3,875,000.00
Phase II Expansion	1997	\$657,000.00
Phase III Expansion	2005	\$3,818,000.00
Proposed Phase IV Expansion	N/A	\$2,122,000.00
S.R. 46 Relocation	2002	\$365,000.00
Phase I – US Hwy. 421 Relocation	2007	\$486,000.00
Phase II – US Hwy. 421 Relocation	2007	<u>\$465,000.00</u>
TOTAL		\$11,788,000.00

In addition to those projects listed, DCRW completes numerous line extensions to bring service to individuals/businesses who have requested a water tap(s).

C. Current System Facilities

The Decatur County Rural Water Corporation currently purchases all their water from the City of Greensburg. The original Water Purchase Contract was based upon the 1992 Master Plan report. The Contract outlined average and peak day flows that DCRW could purchase from five different connection points around the City. Currently DCRW is only purchasing water from two of the five connection points. The parties recently revised their Water Purchase Contract to increase the amount of water DCRW could purchase. The revised water purchase limits of the Contract are as follows:

<u>Connection Point</u>	<u>Ave. Daily</u>	<u>Peak Daily</u>
Phase I*	487,000 gpd	584,000 gpd
Adams (Phase II)*	NA	690,000 gpd
East Greensburg	26,000 gpd	31,000 gpd
Sandusky (North Greensburg)	27,000 gpd	37,000 gpd
South Greensburg	14,000 gpd	<u>16,000 gpd</u>
TOTAL		1,358,000 gpd

(*) currently purchasing water from this point

In addition to these limits, the revised Water Purchase Contract also provides that DCRW must purchase a daily minimum of 120,000 gpd from the City of Greensburg.

DCRW has seen steady increases in both customers and water usage since inception.

Table 2 presents recent historical information for both customers served and water usage.

Table No. 2
Historical Customer and Water Usage Information

<u>Year</u>	<u>Customers Served</u>	<u>Ave. Daily Purchased(gpd)</u>	<u>Ave. Daily Sold (gpd)</u>	<u>% Water Loss*</u>
1999	578	68,100	61,800	9.3%
2000	587	69,500	64,000	7.9%
2001	598	90,500	72,800	19.6%
2002	600	74,900	69,700	6.9%
2003	630	96,400	71,800	25.5%
2004	730	128,400	96,900	24.5%
2005	1,030	165,000	122,100	26.0%
2006	1,038	128,200	123,800	3.4%

* Includes water loss for flushing, line breaks and tank overflow.

Although water usage has steadily increased, DCRW is well below their contractual limits. In fact, based upon the total limits of the Water Purchase Contract, DCRW has excess capacity of over 1 MGD (1.358 MGD contractual total – current usage). Thus, DCRW is in excellent position to provide additional water to areas of Decatur, Ripley and Jennings County.

DCRW operates and maintains a water transmission/distribution system which consists of:

1. Two connection points to the City of Greensburg
2. Approximately 160 miles of 3” through 12” transmission/distribution mains
3. One (1) 300 gpm booster station
4. One (1) 250,000 gallon elevated water storage tank (Overflow elevation of 1,150)

The map presented in Appendix A shows the existing system facilities along with the proposed Phase IV improvements. The map also shows the limits of the City of Greensburg service territory. This territory boundary was set jointly by the City of Greensburg and DCRW. Areas outside of the boundaries will be served by DCRW.

The first connection point with the City of Greensburg is on the South side of the City. Available water pressure on the City’s system is received from tank overflow elevations of 1,100. From this connection point, water flows through a 12” main to a 300 gpm booster station. The booster

station pumps water via a 12" main to a 250,000 gallon water storage tank (overflow elevation of 1,150) located approximately 3 miles south of Greensburg. From the tank, transmission/distribution mains radiate outward throughout the southern portion of Decatur County. A small portion of Northwest Ripley County is also served. Residual pressures on the south end of the County are in the 130-160 psi range.

DCRW's tank overflow elevation of 1,150 is significant. Elevations within Decatur County are higher than those elevations in Ripley and Jennings County. If water is brought into Decatur County from either Ripley or Jennings County, this water will have to be pumped in order to assure adequate pressure to make it usable to customers/areas in Decatur County. However, if water is sold from DCRW's system to either the Ripley or Jennings County Area, gravity flow may be utilized. This greatly impacts the construction and operational costs. Pumping of water requires a booster station, which would cause higher construction costs to build and much higher operational costs due to electricity, maintenance, replacement, etc.

The second connection point with the City of Greensburg is on the Northwest side of the City. This portion of the system "floats" off of the City of Greensburg's 1,100 tank overflow elevation. From the connection point, water flows through a 12" main and serves several residential subdivisions. As the main continues northward, the size decreases to 8" and continues to the Community of Adams. Residual pressures in this area are approximately 60 psi.

Future connection points with the Napoleon Water Company (serving the eastern tip of Decatur County and major portions of Ripley County) and the Town of Westport are also shown on the map in Appendix A. Currently, DCRW's mains are less than 1 mile from both Napoleon Water and Westport's facilities. DCRW's system has been designed in such a manner as to allow water to be wholesaled to both utilities. In fact, the Town of Westport's entire demand can be supplied by DCRW. Currently, the amount of water that could be wholesaled to Napoleon Water may be somewhat limited due to the size of Napoleon's mains near the point of connection. DCRW's tank overflow elevation (1150) allows water to flow into both Napoleon and Westport's system by gravity. Thus, operational/maintenance costs would be minimal.

D. Area Water Demands

In the summer of 2006, Honda of America Manufacturing, Inc. (Honda) announced plans to build a new automotive assembly plant Northwest of the City of Greensburg. This plant has had an immediate and dramatic effect on the potable water supply demands of the area. This plant will also act as a stimulant for supporting factories producing automotive components and complementary industrial, commercial and residential growth. This complementary growth coupled with normal economic expansion will greatly increase water demands.

The Greensburg Decatur County Economic Development Corporation (EDC) has identified several potential industrial development sites throughout Decatur County. Their 2006-2007 Annual Report outlines those potential areas. Figure No. 1 shows those designated industrial site locations. Table No.3 presents those areas along with projected water demands for each:

Table No. 3
Designated Industrial Sites and Water Demand Projections

<u>Site</u>	<u>Size</u>	<u>Project Water Demand (gpd)*</u>
Adams Rail Park	73 Acres	109,500 gpd
Decatur Co. EDC Rail Park	160 Acres	240,000 gpd
Industrial Park	400 Acres	600,000 gpd
BPS Industrial Site	110 Acres	165,000 gpd
Koors Property	42 Acres	63,000 gpd
Westerfeld Property	<u>77 Acres</u>	<u>115,500 gpd</u>
Total	862 Acres	1,293,000 gpd

- Based upon 1,500 gpd/acre

Due to their proximity to the Honda assembly plant, it is reasonable to expect that development of these sites will likely occur prior to development in other parts of Ripley and Jennings County. In fact, the EDC 2006-2007 Annual Report states that the number of industrial leads is soaring and the EDC is contacted on a weekly basis by prospective businesses looking to expand or relocate.

Other portions of Decatur County will likely see a great increase in residential development due to the proximity of the area to the Honda Site. Since DCRW serves approximately 2/3 of the area of the County, they will see increased water demands. Once again, due to the proximity of these areas to the Honda plant, this development will likely occur prior to development in other parts of Ripley and Jennings County. The next section of this report explores possible alternatives to serve the increased needs.

III. WATER SUPPLY ALTERNATIVES

Contractually, Decatur County Rural Water can purchase 1.358 MGD from the City of Greensburg. Since the current average daily usage is 0.128 MGD, DCRW has excess capacity to serve immediate growth. However, improvements are needed to insure that DCRW can transport and distribute this water out into their service territory. Option A will investigate these necessary improvements.

An additional water supply may also be obtained from either Eastern Bartholomew Water or Jennings County Water. Based upon the location of the designated industrial site locations shown in the EDC 2006-2007 Annual Report, the most immediate need appears to be in the Northern portion of Decatur County (adjacent to the Honda Site). Eastern Bartholomew currently has available water (1 MGD) at the Town of Hartsville. Hartsville is located just west of the Decatur County line along SR 46. This additional water is available without the need of additional system improvements to the Eastern Bartholomew system. The proximity and the fact that Eastern Bartholomew would not have to make any additional improvements to their system, makes this alternative attractive. Option B will investigate necessary improvements to bring this supply into DCRW's system and make it usable to customers throughout the region. Option B will also investigate a possible long-term alternative to bring 8 MGD into the area.

Jennings County Water may have available capacity as well. However, this supply will be coming from the south. DCRW would have to connect to Jennings County along the Southern end of Decatur County and transmit this water northward. To get to the immediate need areas (adjacent to the Honda Site), transmission mains would have to be constructed $\frac{3}{4}$ of the way across Decatur County. Also, Jennings County Water will have to make significant upgrades to their system in order to transmit this water northward to Decatur County. Option C will investigate necessary improvements to bring this supply into DCRW's system and make it usable to customers throughout the region.

A. Option A – Transmission and Distribution Improvements To Maximize City of Greensburg Supply

As previously stated, DCRW has a Water Purchase Contract with the City of Greensburg to purchase up to 1.358 MGD on a peak daily basis. In order to transport this water from the connection points and make it usable, improvements are necessary. These improvements include a new 500,000 gallon elevated water storage tank near the designated industrial sites, a new water booster station along US 421 just northwest of the City of Greensburg (in order to fill the new tank) and installation of a new 16-inch water main that would run through the designated industrial sites previously identified. These improvements would provide adequate domestic and fire flow demands to the area around the Honda site. In order to enable additional water to be delivered southward, installation of a new 12-inch water main along C.R. 500 West and C.R. 450 West to S.R. 46 would be required. This allows for transmission of water between the Phase I

connection point and the Adams (Ph. II) connection point. These improvements allow a total of 1.274 MGD (0.584 MGD from the Phase I connection point and 0.690 MGD from the Adams Phase II connection point) of water to be available to users throughout the region. Currently, only 0.128 MGD (based upon water purchased in 2006) of this is being used.

The Option A improvements are presented on the Water Supply Alternative Map located in Appendix B of this report. This map also identifies three potential locations for the new 500,000 gallon elevated water storage tank.

B. Option B – Transmission and Distribution Improvements To Bring Additional Supply from Eastern Bartholomew Water

To augment the contractual amount of water supply DCRW can purchase from the City of Greensburg, Eastern Bartholomew Water currently has 1 MGD (and up to 4 MGD¹ with improvements to their system) of water available near the Town of Hartsville. In order to transport this water into DCRW's system and make it usable to customers throughout the region, improvements are required. This option would consist of a new 500,000 gallon water standpipe and water booster/master meter station near the connection point with Eastern Bartholomew Water (along SR 46 just east of Hartsville near the Decatur/Bartholomew County line). The standpipe would provide storage and suction pressure for the booster station so that Decatur County Rural Water would not interfere with operation of Eastern Bartholomew's existing system. From the booster station a 12-inch main would be constructed along S.R 46 to the intersection with S.R. 3. These improvements would be coupled with the improvements outlined in Option A. Thus, a total of 2.274 MGD (1.274 MGD from Option A + 1 MGD from Eastern Bartholomew) would be available to users throughout the region. These improvements are presented on the Water Supply Alternative Map located in Appendix B of this report.

¹ Eastern Bartholomew Water has indicated that, with improvements to their existing system, 4 MGD would be available near the Town of Hartsville. In order to transport this into the Decatur, Ripley and Jennings County area, the proposed booster station and 12" main along SR 46 could be upsized. The main would require upsizing to 20". These improvements would be coupled with the improvements outlined in Option A. Thus, a total of 5.274 MGD (1.274 MGD from Option A + 4 MGD from Eastern Bartholomew) could be available throughout the region. No probable costs will be prepared for this alternative.

Long term, Eastern Bartholomew Water is able to supply 8 MGD of water to the Decatur, Ripley and Jennings County area. Donnie Smith, Manager of Eastern Bartholomew Water, indicated that this long term supply would be accomplished by making the following improvements to the Eastern Bartholomew Water System:

1. Installation of six (6) - 1,000 gpm supply wells at their existing wellfield
2. Installation of a 7,500 gpm iron removal water treatment plant
3. Installation of a 24" transmission main and appurtenances westward from their wellfield/treatment plant site into Decatur County
4. Installation of a 1 MG elevated water storage tank
5. Installation of a water booster station

These improvements would be coupled with the improvements outlined in Option A. Thus, 9.274 MGD (1.274 MGD from Option A + 8 MGD from Eastern Bartholomew) would be available to users throughout the region. These improvements are presented on the Water Supply Alternative Map located in Appendix B of this report.

C. Option C – Transmission and Distribution Improvements to Bring Additional Supply from Jennings County Water

To augment the contractual supply of water DCRW can purchase from the City of Greensburg, additional water may be purchased from Jennings County Water. For the purposes of this Option, it was assumed that Jennings County would have 1 MGD available for purchase. In order to transmit this water from the Southern end of Decatur County and make it usable to customers throughout the region, improvements are necessary. This option would consist of a new water booster/master meter station at the Southern Decatur County Line along SR 3. From this booster station a 16-inch water main would be constructed along S.R. 3 northward to the intersection of S.R. 46. These improvements would be coupled with the improvements outlined in Option A. Thus, a total of 2.274 MGD (1.274 MGD from Option A + 1 MGD from Jennings County Water) would be available to users throughout the region. These improvements are presented on the Water Supply Alternative Map located in Appendix B of this report.

IV. WATER SUPPLY ALTERNATIVES - PROBABLE PROJECT COSTS

A breakdown of probable construction and non-construction costs were completed for each Option previously discussed. These probable cost breakdowns are presented in Appendix C. It should be noted that for Options B & C, the improvements outlined in Option A are also needed in order to make the water usable to users throughout the region. Thus, the probable project costs for Options B and C also include the probable project costs of Option A. The probable costs for Option B - long term (8 MGD from Eastern Bartholomew) were provided by Donnie Smith, Manager of Eastern Bartholomew Water.

Table No. 4 presents a summary of the amount of water supplied and the associated probable project costs for each option.

Table No. 4

Water Supply Alternatives - Probable Project Cost Summary

Improvement <u>Option</u>	Amount of <u>Water Supply (MGD)</u>	Probable <u>Project Cost</u>	Project Cost Per <u>1,000 Gallons</u>
Option A	1.274 MGD	\$3,827,000	\$3,004
Option B - Short Term	2.274 MGD	\$6,553,000	\$2,882
Option B - Long Term	9.274 MGD	\$25,386,000	\$2,737
Option C	2.274 MGD	\$7,287,000(*)	\$3,204(*)
Option A, B (Short) and C	3.274 MGD	\$10,008,000(*)	\$3,057(*)

(*) Does not include necessary costs by Jennings County Water to get this supply to the South Decatur County line.

Option A	Transmission and Distribution Improvements to Maximize City of Greensburg Supply
Option B	Transmission and Distribution Improvements to Bring Additional Supply from Eastern Bartholomew Water
Option C	Transmission and Distribution Improvements to Bring Additional Supply from Jennings County Water

V. CONCLUSIONS & RECOMMENDATIONS

Based upon this report, the following conclusions can be made:

1. The Honda assembly plant will act as a stimulant for supporting factories producing automotive components and complementary industrial, commercial and residential growth.
2. The Greensburg Decatur County Economic Development Corporation (EDC) is currently marketing several industrial sites around Decatur County. Development (and consequently, increased water demand) near Honda and throughout Decatur County will likely occur prior to development in other parts of Ripley and Jennings County.
3. Based upon the limits of their Water Purchase Contract, DCRW currently has excess capacity of over 1 MGD.
4. DCRW's mains are less than 1 mile from both Napoleon Water and the Town of Westport. The design of DCRW's system allows the wholesale of water (by gravity flow) to both Napoleon Water and the Town of Westport. DCRW could supply Westport's entire demand.
5. The proposed Option A improvements (Transmission and Distribution Improvements to Maximize City of Greensburg Supply) are necessary even if additional water supply is brought in from either Eastern Bartholomew Water or Jennings County Water.
6. Based upon the project cost per 1,000 gallons, additional supply from Eastern Bartholomew (either short term or long term) is the most economical.

The following recommendations are provided:

1. Immediately pursue financing alternatives for the Option A improvements.
2. Work closely with EDC and local planners to keep abreast of the latest possible industrial, commercial and residential development plans.
3. Continue dialog with both Eastern Bartholomew Water and Jennings County Water for possible additional supplies.

Respectfully,

MIDWESTERN ENGINEERS, INC.

John W. Wetzel, P.E.
Project Engineer

APPENDIX A

Existing System with Proposed Ph. VI Improvements Overall Map

APPENDIX B

Proposed Supply Alternative Map

APPENDIX C

Probable Project Costs

**WATER SYSTEM IMPROVEMENTS
SUPPLYING POTABLE WATER TO MEET BOTH THE SHORT AND LONG TERM WATER NEEDS OF
DECATUR, RIPLEY AND JENNINGS COUNTIES
FOR THE
DECATUR COUNTY RURAL WATER CORPORATION
DECATUR COUNTY, INDIANA
SEPTEMBER 2007**

**OPTION A - TRANSMISSION AND DISTRIBUTION IMPROVEMENTS TO MAXIMIZE
CITY OF GREENSBURG SUPPLY**

I. PROBABLE CONSTRUCTION COSTS

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
1.	NEW BOOSTER STATION W/CHLORINATION FACILITIES	1 L.S.	\$420,000.00	\$420,000.00
2.	NEW 500,000 GALLON ELEVATED WATER STORAGE TANK (200' TO OF)	1 L.S.	\$870,000.00	\$870,000.00
3.	16" D.I. WATER MAIN W/POLY. ENCASEMENT	12,000 L.F.	\$44.00	\$528,000.00
4.	16" BUTTERFLY VALVES W/POLY. ENCASEMENT	8 EA.	\$3,500.00	\$28,000.00
5.	16" ROAD & RR BORE	200 L.F.	\$350.00	\$70,000.00
6.	12" PVC, SDR-17 WATER MAIN	30,000 L.F.	\$24.00	\$720,000.00
7.	12" GATE VALVE W/POLY. ENCASEMENT	3 EA.	\$1,700.00	\$5,100.00
8.	12" ROAD & RR BORE	200 L.F.	\$200.00	\$40,000.00
9.	12" CREEK CROSSING	200 L.F.	\$130.00	\$26,000.00
10.	CONNECT TO EXISTING MAIN	1 EA.	\$1,500.00	\$1,500.00
11.	3-WAY FIRE HYDRANT W/6" GATE VALVE	8 EA.	\$3,000.00	\$24,000.00
12.	12" BLOW-OFF	3 EA.	\$3,200.00	\$9,600.00
13.	LEAK DETECTION DEVICE	3 EA.	\$2,500.00	\$7,500.00
14.	BLACKTOP RESURFACING	1,000 L.F.	\$20.00	\$20,000.00
15.	STONE RESURFACING	20 TONS	\$12.00	\$240.00
16.	"B" BORROW BACKFILL	1,225 TONS	\$10.00	\$12,250.00
SUBTOTAL				\$2,782,190.00
CONSTRUCTION CONTINGENCIES				\$278,810.00
TOTAL PROBABLE CONSTRUCTION COSTS - OPTION A				\$3,061,000.00

II. PROBABLE NON-CONSTRUCTION COSTS (25%) - OPTION A

\$766,000.00

III. PROBABLE PROJECT COSTS - OPTION A

\$3,827,000.00

**OPTION B - SHORT TERM IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION IMPROVEMENTS TO BRING
ADDITIONAL SUPPLY FROM EASTERN BARTHOLOMEW WATER**

I. PROBABLE CONSTRUCTION COSTS

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
1.	NEW BOOSTER STATION W/MASTER METER AND CHLORINATION FACILITIES	1	L.S.	<u>\$420,000.00</u>	<u>\$420,000.00</u>
2.	NEW 500,000 GALLON STANDPIPE	1	L.S.	<u>\$500,000.00</u>	<u>\$500,000.00</u>
3.	12" PVC, C-900 WATER MAIN	34,000	L.F.	<u>\$26.00</u>	<u>\$884,000.00</u>
4.	12" PVC, SDR-17 WATER MAIN	3,600	L.F.	<u>\$24.00</u>	<u>\$86,400.00</u>
5.	12" GATE VALVE W/POLY. ENCASEMENT	9	EA.	<u>\$1,700.00</u>	<u>\$15,300.00</u>
6.	12" ROAD BORE	250	L.F.	<u>\$200.00</u>	<u>\$50,000.00</u>
7.	12" CREEK CROSSING	60	L.F.	<u>\$130.00</u>	<u>\$7,800.00</u>
8.	3-WAY FIRE HYDRANT W/6" GATE VALVE	4	EA.	<u>\$2,500.00</u>	<u>\$10,000.00</u>
9.	12" BLOW OFF	1	EA.	<u>\$3,200.00</u>	<u>\$3,200.00</u>
10.	LEAK DETECTION DEVICE	1	EA.	<u>\$2,500.00</u>	<u>\$2,500.00</u>
11.	STONE RESURFACING	50	TONS	<u>\$12.00</u>	<u>\$600.00</u>
12.	"B" BORROW BACKFILL	300	TONS	<u>\$10.00</u>	<u>\$3,000.00</u>
SUBTOTAL					<u>\$1,982,800.00</u>
CONSTRUCTION CONTINGENCIES					<u>\$198,200.00</u>
TOTAL PROBABLE CONSTRUCTION COSTS - OPTION B					<u>\$2,181,000.00</u>

II. PROBABLE NON-CONSTRUCTION COSTS (25%) - OPTION B **\$545,000.00**

III. PROBABLE PROJECT COSTS - OPTION B **\$2,726,000.00**

IV. OPTION A PROJECT COSTS **\$3,827,000.00**

V. TOTAL PROBABLE PROJECT COSTS **\$6,553,000.00**

**OPTION B - LONG TERM IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION IMPROVEMENTS TO BRING
ADDITIONAL SUPPLY FROM EASTERN BARTHOLOMEW WATER**

DONNIE SMITH, MANAGER OF EASTERN BARTHOLOMEW WATER, PROVIDED THE FOLLOWING
PROBABLE COSTS FOR THE PROJECT:

I. PROBABLE CONSTRUCTION COSTS	\$18,747,000.00 ⁽¹⁾
II. PROBABLE NON-CONSTRUCTION COSTS	<u>\$2,812,000.00 ⁽¹⁾</u>
III. PROBABLE PROJECT COSTS - OPTION B	\$21,559,000.00 ⁽¹⁾
IV. OPTION A PROJECT COSTS	<u><u>\$3,827,000.00</u></u>
V. TOTAL PROBABLE PROJECT COSTS	\$25,386,000.00

(1) A detailed breakdown can be provided by Donnie Smith, Manager of Eastern Bartholomew Water if requested.

**OPTION C - TRANSMISSION AND DISTRIBUTION IMPROVEMENTS TO BRING ADDITIONAL SUPPLY FROM
JENNINGS COUNTY WATER**

I. PROBABLE CONSTRUCTION COSTS

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY		UNIT PRICE	TOTAL PRICE
1.	NEW BOOSTER STATION W/MASTER METER AND CHLORINATION FACILITIES	1	L.S.	<u>\$420,000.00</u>	<u>\$420,000.00</u>
2.	16" D.I. WATER MAIN W/POLY. ENCASEMENT	40,000	L.F.	<u>\$44.00</u>	<u>\$1,760,000.00</u>
3.	16" BUTTERFLY VALVES W/POLY. ENCASEMENT	25	EA.	<u>\$3,500.00</u>	<u>\$87,500.00</u>
4.	16" ROAD BORE	300	L.F.	<u>\$350.00</u>	<u>\$105,000.00</u>
5.	16" CREEK CROSSING	200	L.F.	<u>\$250.00</u>	<u>\$50,000.00</u>
6.	3-WAY FIRE HYDRANT W/6" GATE VALVE	11	EA.	<u>\$3,500.00</u>	<u>\$38,500.00</u>
7.	12" BLOW OFF	3	EA.	<u>\$3,200.00</u>	<u>\$9,600.00</u>
8.	LEAK DETECTION DEVICE	3	EA.	<u>\$2,500.00</u>	<u>\$7,500.00</u>
9.	BLACK-TOP RESURFACING	500	L.F.	<u>\$20.00</u>	<u>\$10,000.00</u>
10.	STONE RESURFACING	200	TONS	<u>\$12.00</u>	<u>\$2,400.00</u>
11.	"B" BORROW BACKFILL	2,000	TONS	<u>\$10.00</u>	<u>\$20,000.00</u>
12.	CONNECTION TO EXISTING MAIN	2	EA.	<u>\$1,500.00</u>	<u>\$3,000.00</u>
SUBTOTAL					<u>\$2,513,500.00</u>
CONSTRUCTION CONTINGENCIES					<u>\$251,500.00</u>
TOTAL PROBABLE CONSTRUCTION COSTS - OPTION C					<u>\$2,765,000.00</u>

II. PROBABLE NON-CONSTRUCTION COSTS (25%) - OPTION C **\$690,000.00**

III. PROBABLE PROJECT COSTS - OPTION C **\$3,455,000.00**

IV. OPTION A PROJECT COSTS **\$3,827,000.00**

V. TOTAL PROBABLE PROJECT COSTS **\$7,282,000.00**